

Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

Claim 1 (currently amended): A method for recording, onto a recording medium, (i) ~~AV data obtained by multiplexing a plurality of sets of stream data in accordance with a predetermined multiplexing rule, and (ii) associated data to be reproduced in the same reproduction time-line with the AV data, and the associated data is reproduced by switching with the AV data at least first AV data and second AV data both of which constitute a scene to be reproduced by switching with each other in a same time-line,~~

the method comprising:

a first step of dividing the first AV data into first partial AV data ~~based on a unit that the AV data is reproduced by switching with the associated data~~ in accordance with a predetermined rule, and of dividing the ~~associated~~ second AV data into second partial ~~associated~~ AV data ~~based on a unit that the associated data is reproduced by switching with the AV data~~ in accordance with a predetermined rule;

a second step of ~~securing~~ recording, in-onto the recording medium, a ~~first continuous region for continuously storing the first partial AV data and the second partial associated AV data by alternately disposing the first partial AV data and the second partial AV data,~~ which are to be reproduced by switching with each other;

a step of continuously recording the partial AV data and the partial associated data onto the first continuous region; and

a third step of recording, onto the recording medium, file system management information for (i) ~~managing the AV data and the associated data as different files, and (ii) managing information for handling as different files the first AV data and the associated second AV data as the different files both recorded in the second step;~~

a fourth step of recording a first AV data management information file for managing the first AV data, and a second AV data management information file for managing the second AV data; and

a fifth step of recording, onto the recording medium, a program information file for associating the first AV data with the second AV data for handling as a single content the first AV data and the second AV data both recorded in the second step,

wherein:

the file system management information includes position information of the first partial AV data arranged in an order of reproducing the first partial AV data, and position information of the second partial AV data arranged in an order of reproducing the second partial AV data;

the program information file includes a filename of the first AV data management information file, a filename of the second AV data management information file, and a time stamp indicating a start time of the scene;

the first AV data management information file includes a time stamp indicating a start time of a respective video unit which is a constituent of the scene and can be an entry point for reproduction of the first AV data; and

the second AV data management information file includes a time stamp indicating a start time of a respective video unit which is a constituent of the scene and can be an entry point for reproduction of the second AV data.

Claims 2-7 (canceled)

Claim 8 (currently amended): An AV data recording apparatus for recording, onto a recording medium, ~~(i) AV data obtained by multiplexing a plurality of sets of stream data in accordance with a predetermined multiplexing rule, and (ii) associated data to be reproduced in the same reproduction time-line with the AV data, and the associated data is reproduced by switching with the AV data at least first AV data and second AV data both of which constitute a scene to be reproduced by switching with each other in a same time-line,~~

the AV data recording apparatus comprising:

means a first section for dividing the first AV data into first partial AV data based on a unit that the AV data is reproduced by switching with the associated data in accordance with a predetermined rule, and for dividing the associated second AV data into second partial associated AV data based on a unit that the associated data is reproduced by switching with the AV data in accordance with a predetermined rule;

means a second section for securing recording, in onto the recording medium, a first continuous region for continuously storing the first partial AV data and the second partial associated AV data by alternately disposing the first partial AV data and the second partial AV data, which are to be reproduced by switching with each other;

means for continuously recording the partial AV data and the partial associated data onto the first continuous region; and

means a third section for recording, onto the recording medium, file system management information for (i) managing the AV data and the associated data as different files, and (ii) managing information for handling as different files the first AV data and the associated second AV data as different files both recorded by the second section;

a fourth section for recording a first AV data management information file for managing the first AV data, and a second AV data management information file for managing the second AV data; and

a fifth section for recording, onto the recording medium, a program information file for associating the first AV data with the second AV data for handling as a single content the first AV data and the second AV data both recorded by the second section,

wherein:

the file system management information includes position information of the first partial AV data arranged in an order of reproducing the first partial AV data, and position information of the second partial AV data arranged in an order of reproducing the second partial AV data;

the program information file includes a filename of the first AV data management information file, a filename of the second AV data management information file, and a time stamp indicating a start time of the scene;

the first AV data management information file includes a time stamp indicating a start time of a respective video unit which is a constituent of the scene and can be an entry point for reproduction of the first AV data; and

the second AV data management information file includes a time stamp indicating a start time of a respective video unit which is a constituent of the scene and can be an entry point for reproduction of the second AV data.

Claims 9-13 (canceled)

Claim 14 (currently amended): A computer readable recording medium for storing a program for causing a computer to record onto a recording medium ~~(i) AV data obtained by multiplexing a plurality of sets of stream data in accordance with a predetermined multiplexing rule, and (ii) associated data to be reproduced in the same reproduction time-line with the AV data, and the associated data is reproduced by switching with the AV data at least first AV data and second AV data both of which constitute a scene to be reproduced by switching with each other in a same time-line,~~

the program causing the computer to perform:

a first step of dividing the first AV data into first partial AV data based on a unit that the AV data is reproduced by switching with the associated data in accordance with a predetermined rule, and of dividing the associated second AV data into second partial associated AV data based on a unit that the associated data is reproduced by switching with the AV data in accordance with a predetermined rule;

a second step of securing recording, in onto the recording medium, a first continuous region for continuously storing the first partial AV data and the second partial associated AV data by alternately disposing the first partial AV data and the second partial AV data, which are to be reproduced by switching with each other;

a step of continuously recording the partial AV data and the partial associated data onto the first continuous region; and

a third step of recording, onto the recording medium, file system management information for (i) managing the AV data and the associated data as different files, and (ii)

managing information for handling as different files the first AV data and the associated-second AV data as the different files both recorded in the second step;

a fourth step of recording a first AV data management information file for managing the first AV data, and a second AV data management information file for managing the second AV data; and

a fifth step of recording, onto the recording medium, a program information file for associating the first AV data with the second AV data for handling as a single content the first AV data and the second AV data both recorded in the second step,

wherein:

the file system management information includes position information of the first partial AV data arranged in an order of reproducing the first partial AV data, and position information of the second partial AV data arranged in an order of reproducing the second partial AV data;

the program information file includes a filename of the first AV data management information file, a filename of the second AV data management information file, and a time stamp indicating a start time of the scene;

the first AV data management information file includes a time stamp indicating a start time of a respective video unit which is a constituent of the scene and can be an entry point for reproduction of the first AV data; and

the second AV data management information file includes a time stamp indicating a start time of a respective video unit which is a constituent of the scene and can be an entry point for reproduction of the second AV data.

Claims 15-21 (canceled)

Claim 22 (new): A data recording medium readable by an apparatus capable of playback of AV data, the medium storing at least first AV data and second AV data both of which constitute a scene to be reproduced by switching with each other in a same time-line,

wherein:

the first AV data and the second AV data are stored on the recording medium such that the first AV data is divided into first partial AV data having a predetermined interval, and the

second AV data is divided into second partial AV data having a predetermined interval, and the first partial AV data and the second partial AV data, which are to be reproduced by switching with each other, are disposed alternately;

the recording medium further storing:

file system management information for handling as different files the first AV data and the second AV data;

a first AV data management information file for managing the first AV data;

a second AV data management information file for managing the second AV data; and

a program information file for associating the first AV data with the second AV data for handling as a single content the first AV data and the second AV data,

wherein:

the file system management information includes position information of the first partial AV data arranged in an order of reproducing the first partial AV data, and position information of the second partial AV data arranged in an order of reproducing the second partial AV data;

the program information file includes a filename of the first AV data management information file, a filename of the second AV data management information file, and a time stamp indicating a start time of the scene;

the first AV data management information file includes a time stamp indicating a start time of a respective video unit which is a constituent of the scene and can be an entry point for reproduction of the first AV data; and

the second AV data management information file includes a time stamp indicating a start time of a respective video unit which is a constituent of the scene and can be an entry point for reproduction of the second AV data.

Claim 23 (new): An AV data reproducing method for reproducing AV data stored on a recording medium storing at least first AV data and second AV data both of which constitute a scene to be reproduced by switching with each other in a same time-line,

wherein:

the first AV data and the second AV data are stored on the recording medium such that the first AV data is divided into first partial AV data in accordance with a predetermined rule,

and the second AV data is divided into second partial AV data in accordance with a predetermined rule, and the first partial AV data and the second partial AV data, which are to be reproduced by switching with each other, are disposed alternately;

the recording medium further storing:

file system management information for handling as different files the first AV data and the second AV data;

a first AV data management information file for managing the first AV data;

a second AV data management information file for managing the second AV data; and

a program information file for associating the first AV data with the second AV data for handling as a single content the first AV data and the second AV data,

wherein:

the file system management information includes position information of the first partial AV data arranged in an order of reproducing the first partial AV data, and position information of the second partial AV data arranged in an order of reproducing the second partial AV data;

the program information file includes a filename of the first AV data management information file, a filename of the second AV data management information file, and a time stamp indicating a start time of the scene;

the first AV data management information file includes a time stamp indicating a start time of a respective video unit which is a constituent of the scene and can be an entry point for reproduction of the first AV data; and

the second AV data management information file includes a time stamp indicating a start time of a respective video unit which is a constituent of the scene and can be an entry point for reproduction of the second AV data,

the method comprising:

a first step of acquiring the file system management information from the recording medium;

a second step of acquiring the program information file from the recording medium; and

a third step of acquiring the first AV data management information file and the second AV data management information file from the recording medium.

Claim 24 (new): An AV data reproducing apparatus for reproducing AV data stored on a recording medium storing at least first AV data and second AV data both of which constitute a scene to be reproduced by switching with each other in a same time-line,

wherein:

the first AV data and the second AV data are stored on the recording medium such that the first AV data is divided into first partial AV data in accordance with a predetermined rule, and the second AV data is divided into second partial AV data in accordance with a predetermined rule, and the first partial AV data and the second partial AV data, which are to be reproduced by switching with each other, are disposed alternately;

the recording medium further storing:

file system management information for handling as different files the first AV data and the second AV data;

a first AV data management information file for managing the first AV data;
a second AV data management information file for managing the second AV data; and
a program information file for associating the first AV data with the second AV data for handling as a single content the first AV data and the second AV data,

wherein:

the file system management information includes position information of the first partial AV data arranged in an order of reproducing the first partial AV data, and position information of the second partial AV data arranged in an order of reproducing the second partial AV data;

the program information file includes a filename of the first AV data management information file, a filename of the second AV data management information file, and a time stamp indicating a start time of the scene;

the first AV data management information file includes a time stamp indicating a start time of a respective video unit which is a constituent of the scene and can be an entry point for reproduction of the first AV data; and

the second AV data management information file includes a time stamp indicating a start time of a respective video unit which is a constituent of the scene and can be an entry point for reproduction of the second AV data,

the apparatus comprising:

a first section for acquiring the file system management information from the recording medium;

a second section for acquiring the program information file from the recording medium; and

a third section for acquiring the first AV data management information file and the second AV data management information file from the recording medium.

Claim 25 (new): A computer readable recording medium for storing a program for causing a computer to reproduce AV data stored on a recording medium storing at least first AV data and second AV data both of which constitute a scene to be reproduced by switching with each other in a same time-line,

wherein:

the first AV data and the second AV data are stored on the recording medium such that the first AV data is divided into first partial AV data in accordance with a predetermined rule, and the second AV data is divided into second partial AV data in accordance with a predetermined rule, and the first partial AV data and the second partial AV data, which are to be reproduced by switching with each other, are disposed alternately;

the recording medium further storing:

file system management information for handling as different files the first AV data and the second AV data;

a first AV data management information file for managing the first AV data;

a second AV data management information file for managing the second AV data; and

a program information file for associating the first AV data with the second AV data for handling as a single content the first AV data and the second AV data,

wherein:

the file system management information includes position information of the first partial AV data arranged in an order of reproducing the first partial AV data, and position information of the second partial AV data arranged in an order of reproducing the second partial AV data;

the program information file includes a filename of the first AV data management information file, a filename of the second AV data management information file, and a time stamp indicating a start time of the scene;

the first AV data management information file includes a time stamp indicating a start time of a respective video unit which is a constituent of the scene and can be an entry point for reproduction of the first AV data; and

the second AV data management information file includes a time stamp indicating a start time of a respective video unit which is a constituent of the scene and can be an entry point for reproduction of the second AV data,

the program causing the computer to perform:

a first step of acquiring the file system management information from the recording medium;

a second step of acquiring the program information file from the recording medium; and

a third step of acquiring the first AV data management information file and the second AV data management information file from the recording medium.